INCIDENT ACTION PLAN

FARMINGTON FIRE
UT-WCF-252

DAY OPERATIONAL PERIOD
JULY 16, 2003

Rocky Mountain IMT1
Steve Hart, IC

INCIDENT OBJECTIVES

ICS-202

1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED
Farmington	07/15/03	2000

4. OPERATIONAL PERIOD (DATE/TIME)

07/16/03 0700-1900 hours

5. GENERAL CONTROL OBJECTIVES FOR THE INCIDENT (INCLUDE ALTERNATIVES)

1. **FIREFIGHTER SAFETY: Mitigate risk to firefighters by completing an Incident Risk Analysis and implementing LCES, Code of Safe Practices, and Tridata recommendations.**

2. **PUBLIC SAFETY: Avoid elevated risk to public safety by controlling traffic along roads if the fire or smoke threatens safe vehicle movement; also by posting road blocks at access points to the incident, and informing the general public of incident operations.**

3. **Minimize additional acreage burned in municipal watersheds through direct and indirect tactics.**

4. **Protect FAA radar site on Francis Peak and summer homes in the path of the fire.**

5. **Minimize suppression impacts to Morris Creek Research Natural Area.**

6. **SUPPRESSION OPERATIONS: Using solid anchor points, apply a combination of direct and indirect attack to flank the fire. Hold the fire west of a line from the headwaters of Steed Creek north into Hell Hole Creek and Whipple Creek; hold south of Shepard Creek; hold fire east of the Fire Break Road down to Steed Creek; and north of ridge between Hornet Creek and Steed Creek.**

7. **Construct water bars, using "5-D" methodology, on constructed firelines that are secure from fire threat.**

6. WEATHER FORECAST FOR OPERATIONAL PERIOD

Mostly sunny. Maximum temperatures mid-90s at lower elevations; mid-80s at higher elevations. Minimum RH 20-27% at higher elevations; 14-18% at lower elevations. Winds southwesterly at 10-15 mph on ridgetops; slope/valley winds upslope 5-10 mph by afternoon. Slight chance of dry thunderstorms in the afternoon. Haines Index 6

7. GENERAL/SAFETY MESSAGE

The character of slopes has not changed even though the fire now poses only limited threats. Be careful of your footing.

8. ATTACHMENTS (CHECK IF ATTACHED)

- X☐ ORGANIZATION LIST (ICS 203)
- X☐ DIVISION ASSIGNMENT LISTS (ICS 204)
- X☐ COMMUNICATIONS PLAN (ICS 205)
- X☐ MEDICAL PLAN (ICS 206)
- X☐ INCIDENT MAP
- ☐ TRAFFIC PLAN
- X☐ FIRE BEHAVIOR FORECAST
- X ☐ WEATHER FORECAST
- ☐ OTHER

9. PREPARED BY (PLANNING SECTION CHIEF)	10. APPROVED BY (INCIDENT COMMANDER)
Steve Petersburg	

ORGANIZATION ASSIGNMENT LIST

1. Incident Name: FARMINGTON

2. Date Prepared: 07/15/03

3. Time Prepared: 1249

4. Operational Period: 07/16/03 Wednesday Day Shift 0700 - 1900

Position	Name
5. Incident Commander and Staff	
Incident Commander	**Steve Hart, Larry Gregory**
Incident Commander (T)	**Ted Moore**
Safety Officer	**Mike Sugaski**
Information Officer	**L. Barclay; L. Pisano- Pedigo; S.Woods; S.Segin**
Liaison Officer	
6. Agency Representative	
Agency	Name
FS Agency Rep	**Tom Tidwell**
FS Agency Rep	**Loren Kroenke**
Resource Advisor	**Steve Scheid**
7. Planning Section	
Chief	**Steve Petersburg, Jim Jaminet**
Deputy	
Resources Unit	**Angela Parker**
Situation Unit	**Dave Silvieus, Dan Ochocki**
Documentation Unit	**Bruce Mangan; Marla Wertz**
Demobilization Unit	**C.Hartman, P.Peck**
Fire Behavior Analyst	**David Dallison**
Human Resource Specialist	
Training Specialist	**Darrin Dodson**
GIS Specialist	**Anderson, Tony**
Computer Specialist	**Doug Wagner, Geri Morris**
Incident Meteorologist	**Chuck Redmond**

9. Operations Section	
Day	**L.Floyd, B.Post, J.Wallace**
Night	
a. Branch I - Division/Groups	
Branch Director	
Deputy	
Division/Group **A/B**	**Frank Keeler**
Division/Group E	**Dick Spiess, D.Kennel**
Division/Group **F/H/M**	**Air Patrol**
b. Branch II - Division/Groups	
Deputy	
Division/Group	
Division/Group	
Division/Group	
Division/Group	
Division/Group	
c. Branch III - Division/Groups	
Branch Director	
Deputy	
Division/Group	
Division/Group	
Division/Group	
Division/Group	
Division/Group	
d. Air Operations Branch	
Air Operations Branch Director	**Jim Johnston**
Helibase Manager	**M.Reba**
Air Attack Supervisor	**Bob Leighty, Dan Pierson**
Air Support Supervisor	**Larry Lofswold**
Helicopter Coordinator	

8.	Logistics Section
Chief	**S.Bauer, V.Chanay (T)**
Deputy	**G.Shaffer**
Supply Unit	**Jim Dahlberg**
Facilities Unit	**R.Showman, J. Blivens (T)**
Ground Support Unit	**Ray Bergquis**t
Communications Unit	**J.Fischer (T), T. Rhodes**
Medical Unit	**Jeff Hatch**
Security Unit	**Jim Maloney**
Food Unit	**Dave Veselka**

Air Tanker Coordinator	
10.	Finance Section
Chief	**Sue Shirts**
Deputy	
Time Unit	**Peggy Jacobson**
Procurement Unit	**Kermit Johnson**
Compensation/Claims Unit	**Denise Tomlin**
Cost Unit	**Connie McCaughey**

Prepared by (Resource Unit Leader)

Angela Parker

Division Assignment List

1. Branch

2. Division/Group A/B

3. Incident Name FARMINGTON

4. Operational Period 07/16/03 Wednesday Day Shift 0700 - 1900

5. Operations Personnel

Operations Chief	**LARY FLOYD**	Division/Group Supervisor	**FRANK KEELER**
Operations Chief	**JEFF WALLACE; BERNIE POST**	Air Attack Supervisor	**BOB LEIGHTY; DAN PIERSON**
Branch Director		Safety Officer	**MICHAEL SUGASKI**

6. Resources Assigned this Period

Strike Team/Task Force/ Resource Designator	Leader	Number Of Persons	Trans. Needed	Drop Off PT./Time	Pick Up PT./Time
IDAHO CITY IHC	RUSS LONG	20	N	DP 5 0700	DP 5 2000
EMTB	MARK GIANFILIPPO	1	N	DP 5 0700	DP 5 2000

7. Waterbar handlines according to rehab standards. Continue bucket drops using water in unstaffed areas.

8. Special Instructions
All Personnel: maintain hydration. Utilize bucket drops as needed. PIck up flagging and trash items, shuttle out.

9. Division/Group Communications Summary

Function	Frequency - RX	Frequency - TX	Tone	System	Channel	System	Channel
Command	168.700	170.975		King	5	NIFC	
Tactical Div/Group	168.050	168.050		NIFC	1	NIFC	
Logistics							
Air to Ground	164.975	164.975		NIFC	6	NIFC	

Prepared By (Resource Unit Leader): Angela Parker

Approved By (Planning Section Chief):

Date Prepared: 07/15/03

Time Prepared: 1253

Division Assignment List

1. Branch

2. Division/Group
E

3. Incident Name
FARMINGTON

4. Operational Period
07/16/03 Wednesday Day Shift 0700 - 1900

5. Operations Personnel

Operations Chief	**LARY FLOYD**	Division/Group Supervisor	**DICK SPIESS, T.KENNELL**
Operations Chief	**JEFF WALLACE; BERNIE POST**	Air Attack Supervisor	**BOB LEIGHTY; DAN PIERSON**
Branch Director		Safety Officer	**MICHAEL SUGASKI**

6. Resources Assigned this Period

Strike Team/Task Force/ Resource Designator	Leader	Number Of Persons	Trans. Needed	Drop Off PT./Time	Pick Up PT./Time
RUBY MTN IHC	SHANE MCDONALD	21	N	HELIBASE 0700	ICP 2000
EMTB	TRINA WADE	1	N	HELIBASE 0700	ICP 2000
SOF2	FLOYD BARTLETT	1	N	HELIBASE 0700	ICP 2000

7. Control Operations
Waterbar handlines according to turn back stands. Exclude underslung line.

8. Special Instructions
Keep all personnel hydrated. Utilize bucket as needed. PIck up flagging and trash items, shuttle out.

9. Division/Group Communications Summary

Function	Frequency - RX	Frequency - TX	Tone	System	Channel	System	Channel
Command	168.700	170.975		KING	5	NIFC	
Tactical Div/Group	168.200	168.200		NIFC	2	NIFC	
Logistics							
Air to Ground	164.975	164.975		NIFC	6	NIFC	

Prepared By (Resource Unit Leader)	Approved By (Planning Section Chief)	Date Prepared	Time Prepared
Angela Parker		07/15/03	1255

Division Assignment List

1. Branch

2. Division/Group H/M/F

3. Incident Name FARMINGTON

4. Operational Period 07/16/03 Wednesday Day Shift 0700 - 1900

5. Operations Personnel

Operations Chief	**LARY FLOYD**	Division/Group Supervisor	
Operations Chief	**JEFF WALLACE; BERNIE POST**	Air Attack Supervisor	**BOB LEIGHTY; DAN PIERSON**
Branch Director		Safety Officer	**MICHAEL SUGASKI**

6. Resources Assigned this Period

Strike Team/Task Force/ Resource Designator	Leader	Number Of Persons	Trans. Needed	Drop Off PT./Time	Pick Up PT./Time
PATROL BY AIR					

7. Control Operations

8. Special Instructions

9. Division/Group Communications Summary

Function	Frequency - RX	Frequency - TX	Tone	System	Channel	System	Channel
Command							
Tactical Div/Group							
Logistics							
Air to Ground							

Prepared By (Resource Unit Leader)

Approved By (Planning Section Chief)

Date Prepared 07/15/03

Time Prepared 1259

FIRE WEATHER FORECAST

FORECAST NO. 4

NAME OF FIRE: FARMINGTON CANYON **PREDICTION FOR:** DAY **SHIFT**

UNIT: WASATCH-CACHE NF **SHIFT DATE:** JULY 16, 2003

TIME AND DATE **SIGNED:**
FORECAST ISSUED: 07/15/03 2100 **Incident Meteorologist**

WEATHER DISCUSSION:

HIGH PRESSURE OVER THE FOUR CORNERS THE PAST SEVERAL DAYS WILL MOVE INTO COLORADO THIS AFTERNOON AS A PACIFIC STORM SYSTEM MOVES INTO THE PACIFIC NORTHWEST. AN INCREASE IN MOISTURE IN THE MID LEVELS OF THE ATMOSPHERE WILL CONTINUE TO MOVE INTO THE AREA THROUGH THE DAY BRINGING WITH IT A SLIGHT CHANCE OF AFTERNOON AND EVENING DRY THUNDERSTORMS. ADDITIONAL MOISTURE IS EXPECTED TO MOVE INTO THE AREA THURSDAY AND FRIDAY LEADING TO SCATTERED SHOWERS AND THUNDERSTORMS.

WEATHER FORECAST

WEATHER: PARTLY CLOUDY IN THE MORNING…INCREASING CLOUDS BY THE AFTERNOON WITH A SLIGHT CHANCE OF DRY THUNDERSTORMS.
TEMPERATURES: HIGH 92 TO 96 IN THE VALLEYS/MIDSLOPES AND 83 TO 87 OVER THE RIDGES.
HUMIDITY: VALLEYS/MIDSLOPES 14 TO 18% AND RIDGES 18 TO 25%.

20 FT WINDS: ***GUSTY WINDS NEAR THUNDERSTORMS***
RIDGETOP - SOUTHWEST 10 TO 15 MPH.
SLOPE/VALLEY – DOWNSLOPE 5 TO 15 MPH THROUGH 1000 AM…BECOMING UPSLOPE/UPVALLEY 5 TO 15 MPH BY THE AFTERNOON.

HAINES INDEX: 6 HIGH.
STABILITY/INVERSION: TOP OF THE INVERSION AROUND 5500-6000 FT MSL AND IS EXPECTED TO BREAK BETWEEN 1000 AND 1100 AM.

OUTLOOK FOR NEXT SHIFT:

PARTLY CLOUDY WITH A CHANCE OF SHOWERS AND THUNDERSTORMS. HIGHS IN THE LOWER 80S TO LOWER 90S. MIN RH 15 TO 25 PERCENT. WINDS UPSLOPE 5 TO 15 MPH WITH SOUTHWEST WINDS 10 TO 15 MPH OVER THE RIDGES…EXCEPT GUSTY NEAR THUNDERSTORMS.

EXTENDED FORECAST:

FRIDAY THROUGH SUNDAY… PARTLY CLOUDY. A SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS. HIGHS 82 TO 92. SOUTHWEST WIND 10 TO 15 MPH.

OBSERVED WEATHER FOR TUESDAY:

DIV E/F (RIDGELINE)	MAX TEMP	88	MIN RH	21%
FRAWS-13 (FARM. CANYON 5250 FT)	MAX TEMP	102	MIN RH	5%
FRAWS-17 (FARM. CANYON 7750 FT)	MAX TEMP	89	MIN RH	8%

FIRE BEHAVIOR FORECAST

Forecast # 4 Issued by: David Dallison

Fire name: Farmington Canyon Prediction for Day shift

Unit: WCF . Shift date: 7/16 /03

Time and date of forecast: 1600 7/15/03 Signed:_____

WEATHER SUMMARY:

See weather forecast for detailed weather discussion.

FIRE BEHAVIOR

General:

Fire activity should be very minimal today.

Individual tree torching in interior islands is possible but unlikely in the steep chutes with conifer fuels along the north aspect of Farmington canyon. Oak brush fuels in the higher elevations will continue to burn out with some interior surface spread. Occasional torching is possible but will be rare.

Specific:

Highest potential for perimeter increase will be to the southeast along upper slope on the south side of Farmington canyon in division C and D.

Gusty winds from thunderstorms can suddenly increase fire intensity, and rate of spread.

Potential surface fire rates of spread:

Rates of spread of 5-10 ch/hr are possible when winds align with slope and conifer fuels. Backing fires will generate slower rates of spread .5 to 2 ch/hr. Wherever dense oak brush and cured grass is present, much higher upslope rates of spread are possible in the 30-60 ch/hr range. Potential fire behavior remains high however the probability of significant spread events is very low, due to suppression efforts.

Potential Flame lengths

Expect flame lengths of 4-8 ft in the surface conifer fuels and 2-3 feet for grass fuels, where the fire is burning upslope, 1-2 feet for backing fires. If crown runs occur expect flame lengths in excess of 100 feet in conifer 20 feet in oakbrush.

Spotting: Probability of ignition will be near 60% at the start of the shift increasing to 90% by late afternoon.

Fuel Moistures

Higher elevation fuels above 6500 feet and valley bottom fuels in riparian areas are greener and fire behavior will tend to moderate in these areas. 100 and 1000 hour fuels are very low in spruce fir stands making spotting potential high and increasing the potential for crowning.

Air operations: no concerns

Safety

Watch for re-burn potential in oak brush that has been under-burned particularly if gusty thunderstorm winds occur. Watch for chimney effect in Farmington canyon.

LCES.

HEALTH AND SAFETY MESSAGE

SAFETY starts with ***YOU***

We are **ALL** accountable for **SAFE** behaviors

INCIDENT: Farmington	DATE: 07/16/03	TIME: 0700 to 1900

Major Hazards and Risks: **Complacency,** steep slopes, snakes, heat exhaustion, dehydration, unburnt fuel
Air Operations: bucket drops,
Traffic: congestion in town; steep, narrow, windy road (Farmington Canyon)

Fire Order of the Day – ***I***nitiate all actions based on current weather and expected fire behavior

Narrative: **Complacency**: you have spent the last few days on the same piece of line, up and down, checking and rechecking for hot spots, for material that has rolled over the line, and posting lookouts to see if there is any heat that can threaten the line or your safety. It seems routine, mundane and boring. Fatique and sore joints are setting in. This is not a time to let down your guard. The fire behavior may not be as intense, but many of the same hazards are still there. Stay busy but take needed rest breaks. Be innovative and creative on the task you're doing. Come up with some brain-teasers to keep things lively. Keep a good attitude and humor and the day will go a lot faster. And, never get into a fight with an ugly person, they have nothing to loose.
The team very much appreciates the hard work and safe record. Keep drinking the fluids, and stay away from the snakes.

Watch Out Situation of the Day

11.UNBURNED FUEL BETWEEN YOU AND THE FIRE

Look Up, Look Down, Look Around

***Look Up:** Check the sky for any weather changes such as building or approaching thunderstorms, wind shifts or increasing in speed. Watch for air operations and water drops. Look for snags.

***Look Down:** Watch your footing. Keep an eye out for snakes, bees nests and observe fine fuels on the ground.

*** Look Around** Check fuel loading in the area, general terrain, current fire behavior and ladder fuels. Keep an eye on fellow firefighters for signs of heat stress and smoke inhalation.

Incident Safety Team: Mike Sugaski, Marv Strom, Floyd Bartlett

Incident Radio Communications Plan

1. Incident Name: FARMINGTON

2. Operational Period: 07/16/03 Wednesday Day Shift 0700 - 1900

3. Basic Radio Channel Utlization

Radio Type/Cache	Channel	Fuction	Frequency/Tone	Assignment	Remarks
NIFC	1	Tactical 1	168.050 168.050	DIVS A/B	
NIFC	2	Tactical 2	168.200 168.200	DIV E	
NIFC	4	Command Direct	168.700 168.700	All	
NIFC	5	Command Repeater	168.700 170.975	All	
NIFC	6	Air to Ground	164.975 164.975	A/G Tactical Ops	
NIFC	8	Forest Repeater	168.125 164.125 Tone 110.9	EMERGENCY ONLY	
NIFC	13	NOAA Weather	162.550		
NIFC	14	Air Guard	168.625 168.625	Aircraft Emer. Only	

4. Prepared By (Communications Unit): JL Fischer, COML

5. Date Prepared: 07/15/03

6. Time Prepared: 1900

MEDICAL PLAN	1. Incident Name	2. Date Prepared	3. Time Prepared	4. Operational Period
	Farmington Fire	**07.15.2003**	**2000**	**Day/Night**

5. Incident Medical Aid Station

Medical Aid Stations	Location	EMT Level BLS	EMT Level ALS
Farmington ICP	**Davis County FG (40 58 55.3 x 111 54 14.2) Elev 4268**		**X**
	Helibase @ Lagoon (40 59 16.9 x 111 53 48.6) Elev 4337	**X**	

6. Transportation

A. Ambulance Services

Name	Address	Phone	EMT Level BLS	EMT Level ALS
Davis County Sheriffs Office Dispatch	**Farmington UT**	**911 451.4141 or 451.4150 or 451.4151**		**X**
Air Med (U of U)	**SLC UT**	**581.2991**		**X**
Life Flight (LDS)	**SLC UT**	**321.1234**		**X**
McKay Dee	**Ogden UT**	**321.1234**		**X**

B. Incident Ambulances

Name	Location	EMT Level BLS	EMT Level ALS
1 WM (Helo)	**Farmington Helibase (Lagoon)**	**X**	

7. Hospitals

Name	Address	Travel Time In Minutes Air	Travel Time In Minutes Grnd	Phone	Helipad Yes	Helipad No	Burn Center Yes	Burn Center No
Lakeview Hospital	**Bountiful UT (40 52.4 x 111 49.9)**	**5**	**12**	**299.2143**	**X**			
Davis Hospital	**Leyton UT (41 5.3 x 111 59.7)**	**5**	**15**	**774.7177**	**X**			
McKay Dee	**Ogden UT (41 11.6 x 111 57.0)**	**N/A**	**25**	**398.3737**	**X**			
LDS Hospital	**Salt Lake City UT (40 46.6 x 111 52.7)**	**N/A**	**25**	**408.1181**	**X**			
University of Utah	**Salt Lake City UT (40 46.34 x 111 50.24**	**N/A**	**35**	**581.2293**	**X**		**X**	
Ogden Regional	**Ogden UT (41 9.8 x 111 58.2)**	**N/A**	**20**	**479.2376**	**X**			

8. Medical Emergency Procedures

ALL injuries must be reported to direct supervisor. In case of medical emergency, contact DIVS, who will contact Farmington Communications/Medical Unit Leader and they will take over contact with reporting party. Closest medical personnel will respond to the emergency location. If the situation is URGENT, Division can request a Medivac helicopter immediately through Communications and Medical. Use the Command Channel for radio transmissions concerning medical situations and make sure that you are heard. If necessary, Communications will declare emergency radio traffic only, to assure open communications. Be aware that limited visibility or darkness may delay or negate air transport. REMEMBER NOT TO USE THE PATIENTS NAME!

9. Prepared by (Medical Unit Leader) Jeff J. Hatch	10. Reviewed by (Safety Officer) Mike Sugaski

INCIDENT RISK ANALYSIS (215a)

DIV	HAZARDOUS ACTIONS OR CONDITIONS	MITIGATIONS/WARNINGS/REMEDIES
Div's. A/B E	Steep Rocky Terrain Unburn pockets of fuel Reburn potential Underslung line Dehydration Heat exhaustion	Good footing and route selection Maintain **LCES** Maintain **LCES** Check for rollout material Drink one quart/ Hr., 3: 1 H2O to sports drink Rest often, pace yourself
	Rattlesnakes Poison Ivy	Avoid, watch where you step and put your hands Identify and avoid
	Communications Fatique Complacency	Check frequencies before going to the line, and when you change locations Follow 2:1 work/rest guidelines. Rest when needed Stay busy, be creative
AIR OPERATIONS	Air traffic Terrain Bucket drops Sling loads Powerlines Poor visibility- Dip sites	Maintain Air Attack platform Good como Good A/G como, stay clear of drop zone Identify and avoid Good como and coordination of aircraft Provide dip site manager
TRAFFIC	Congestion through town Farimington Canyon Rd (steep, narrow, one way)	Drive slowly and defensively Road blocks in place.

INCIDENT NAME: **Farmington Canyon**	Date Prepared: 7/14/03 Signed _____	Operational Period: 0600-1900

Air Operations Summary

Prepared by: Jim Johnson Prepared Date/Time: 7-15-03 2030

(Expanded Form for Large Operations)

1. Incident Name: Farmington	2. Operational Period: Day Date: 7-16-03	3. # of Copies Needed: FAX 1 copy to NUC and Hill ATB

3. Remarks (Safety Notes, Hazards, Air Operations Special Equipment, TFR Coordinates, etc):

All pilots and crew will review flight hazard map and receive a safety briefing

FLY WITH LIGHTS AND TRANSPONDER ON (SQWAK 1255)

Special caution for general aviation aircraft flying I-15 corridor.

HAZARDS: Wires, Smoke, Other Aircraft, Winds Helibase Lat/Long: 40 59 16.9 X 111 53 48.6

Sunrise: Sunset: Helibase Phone #: 801-647-0205 (Lagoon) 208-634-9419 (Morgan)

5. TFR Radius: 3 NM

Altitude: MSL

Centerpoint: Lat
Long

6. Personnel	Phone #	7. Frequencies	AM	FM	8. Fixed-Wing	# Avail/Type/Make-Model//FAA #/ Base(s)
AOBD: J. Johnson		Air-Air Fixed-wing and rotor wing	123.050		Air Tankers	Available on request through air attack
ASGS: Larry Lofswold						
ATGS: B. Leighty		Air-Ground:		164.975	Lead Planes	Same
ATGS: Dan Pierson						
HLCO		Command Rptr:	See communications plan		ATGS Aircraft	AC-500 0FT, C-337 1ZJ
HEB1:T. McCauley (Lagoon)		Deck:		163.100	Other	Mobile Retardant Plant
HEB1: D. Lewis (Morgan)		TOLC:		168.350		

9. Helicopters (Use Additional Sheets As Necessary)

FAA #	Type	Make/Model	Base	Avail	Start	Remarks	FAA #	Type	Make/Model	Base	Avail	Start	Remarks
JDR	1	S-61	MHB										
2FH	1	S-70	MHB										
30F	2	B-212	LHB										
1WM	3	AS-350	LHB										
1HP	3	B-206B3	LHB			Radiometric Mapping							
						LHB = Lagoon HB MHB Morgan HB							

10. Task/Mission/Assignment (Use ICS-220a if additional space is needed; Type/Function Includes: Air Tactical, Retardant/ Recon, Personnel Transport, Water Dropping, etc))

Type/Function	Name of Personnel or Cargo (if applicable) or Instructions for Tactical Aircraft	Mission Start	Fly From	Fly To
Air Tactical	Provide “eye in the sky” during operational period.			
F/W Aerial Retardant Lead Plane	Request as needed through air attack. Provide target description by lat/long or Division and landmark			
Medevac	See medical plan. Request through ICP Communications. Give location (lat/long or grid #) and ground contact.			
Recon, general Recon, specific	Request as needed through HEB1, ASGS or AOBD.			
Crew Shuttle	0800; fly Ruby Mountain IHC to H-5 No shuttle at end of shift			
Water Bucket/Tank	Request as needed through ATGS. Give location (lat/long preferred), type of helicopter needed and ground contact.			
Patrol by air (ATGS) Div. H/F/M				
Cargo	As requested			
Water bucket	Div. B/C/D, targets of opportunity as directed by air attack or ground contacts			
Radiometric mapping	Helicopter 1HP will be doing mapping flights during the day.			
	Helibase personnel to monitor general aviation use of I-15 corridor; provide heads up to air attack if aircraft intrude into fire area TFR			

Safety First

The Five-D System for Effective Fireline Waterbars

Michael J. Furniss
USDA Forest Service
Pacific Northwest
Research Station
Corvallis, Oregon

To make effective waterbars on firelines, just remember the 5-D System. The five **D's** are: **Distance, Diagonal, Divert, Discharge,** and **Dissipate.**

Most forest values depend on healthy soils; clean water, streams full of fish, diverse wildlife habitats, productive timberlands, beautiful places, and so on. Firefighters strive to protect our soils by suppressing the wildfires that can damage them.

Methods used to fight fires, especially firelines, can cause erosion and soil degradation, and need to be treated to properly maintain forest values. Fireline surfaces usually cause runoff during heavy rainfall and snowmelt. Without waterbars, excessive runoff will concentrate and cause rills and gullies to form. Effective waterbars can prevent this from happening.

Distance: To be effective, waterbars must break up drainage areas and runoff on the fireline so that there's not enough erosive energy available in runoff to erode the soil. To ensure that excess runoff cannot accumulate, waterbars must be placed the proper distance apart, based on the slope of the fireline. This breaks up the area that accumulates runoff, keeping it small enough to prevent damage. Erosion potential depends on slope and a table is provided on the next page that gives the maximum distance between waterbars, or between a waterbar and the next upslope drainage break.

Diagonal: After deciding where you will put each waterbar, the next decision is how to build them. An important principle in working with flowing water is: don't bully the flow, lead it. Waterbars built directly across a fireline oppose the water's energy and tend to fail. Waterbars built diagonal to the fireline lead the water off and work much better. A diagonal waterbar has a gentle slope along its base that leads the water off. A simple rule is to add 5 to the slope of the road, in percent, and build the waterbar at that many degrees from perpendicular. Or simpler yet, just build them at 30 degrees off perpendicular (see the illustration on the next page).

Divert: A good waterbar will divert the water off the fireline. To do this the waterbar must be sufficiently deep to handle all the flow for as long as it's needed. Excavation is much more effective than fill in making a durable and effective waterbar (a ditch or a dip beats a dike).

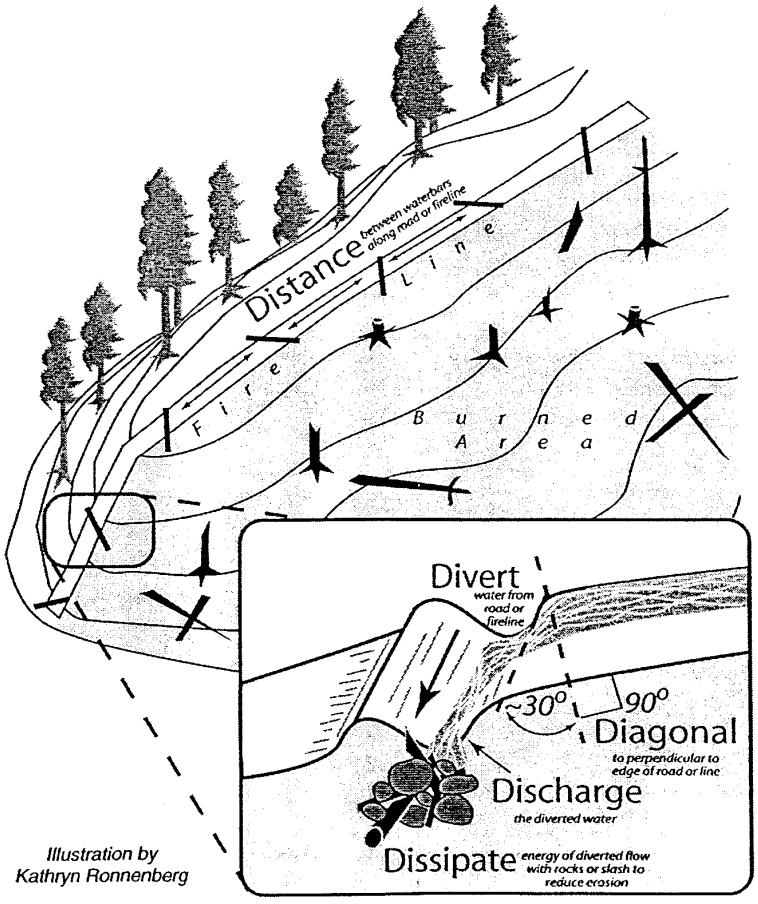
Discharge: Another feature of a good waterbar is that it will discharge the flow. A good waterbar is not a dam - it must have an open outlet.

Dissipate: Finally, a good waterbar should dissipate the flow just below the outlet to exhaust its eroding power and cause it to filter into the soil. This may require placing slash, rock, or debris below the outlet, or fudging a bit on distance to take advantage of natural features that will dissipate the water's erosive energy.

So remember, when locating and building waterbars, place them the right distance apart, at a **diagonal** to the fireline, so that they divert, then **discharge,** then **dissipate** the energy of the flowing water. Be sure to make them deep enough so they'll be durable.

Fireline slope %	Maximum Distance Apart (feet)
1-6	300
7-9	200
10-14	150
15-20	90
21-40	50
41-60	25

Recommended spacing for waterbars on firelines. *Waterbars should be no furthers apart than this, but they may be closer. When in doubt, put in more. From: UDSA-Forest Service, "Sale Administrator's Handbook"*



Reference: Hauge, C.J., M.J. Furniss and F.D. Euphrat. 1979. *Soil erosion in California's Coast Forest District.* California Geology. June, 1979

MISC INFO……..

LOGISTICAL INFORMATION –

Shower Hours : 0500 to 1100
1300 to 2300

.

Meal Hours :

Breakfast – 0500 to 0900
Dinner - 1800 to 2200

Quiet Hours: 2200 to 0500

Supply Hours: 0600 to 2200

Mail Stop: A box for outgoing mail is set up at the Information Officer station which is located in the middle metal building.

Fuel: For vehicles that do not have an agency vehicle charge card (GSA), an agreement is set up at the Maverick station at the southwest corner of Shepard Lane and Highway 89 approximately two miles north of the helibase. Talk to Ground Support to get the details.

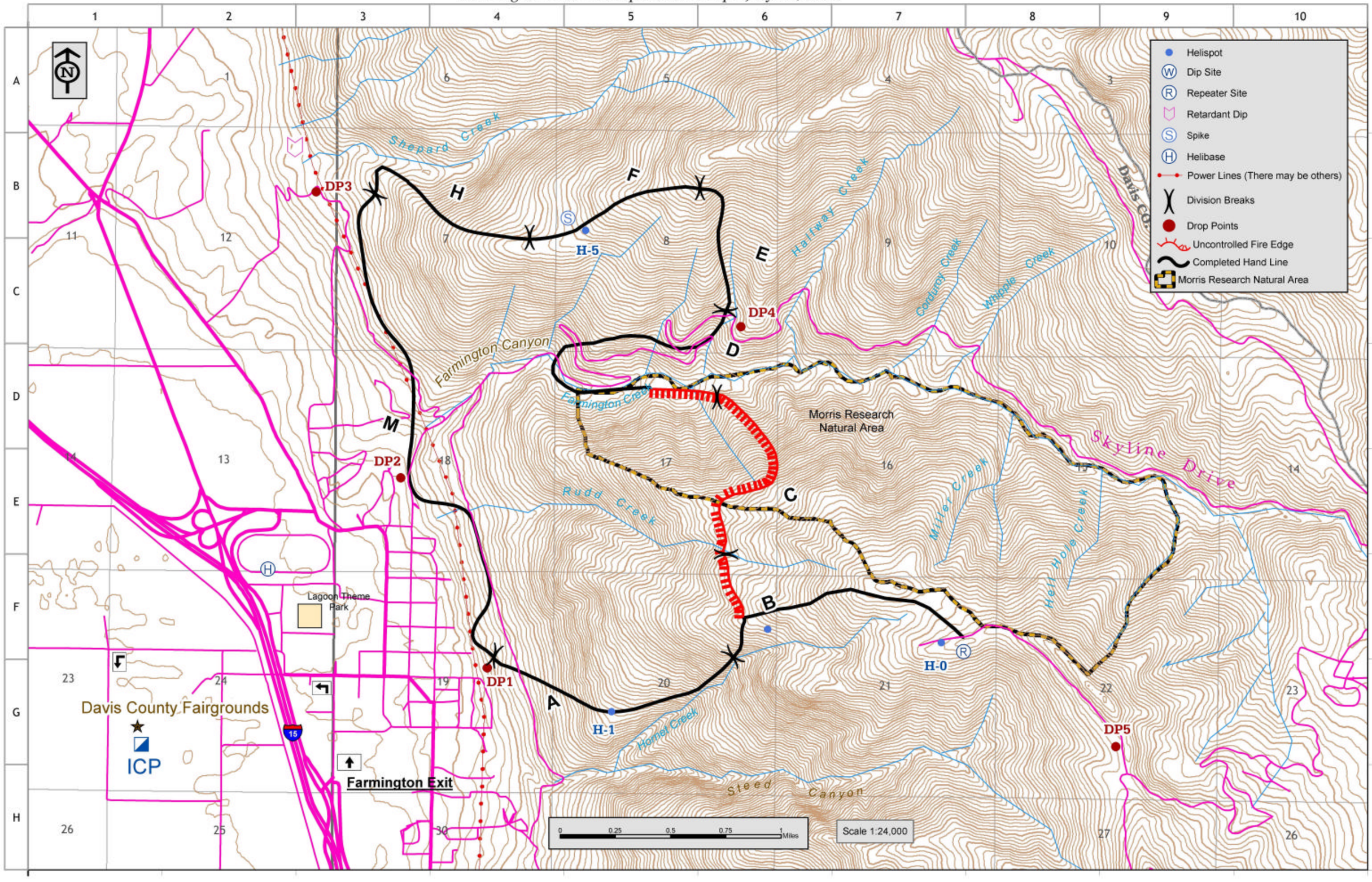
Car Wash – Arrangements have been made with the Super Wash car wash across the highway (east) from the Maverick station where the fuel agreement is set up. Check with Ground Support for information on how to get your vehicle washed for **noxious weed mitigation and safety**.

Traffic pattern in camp parking lot is one way in and one way out – please pay attention to the signs and drive slowly.

PLANNING SECTION INFORMATION

The Farmington Incident now has a TRAINING SPECIALISTS (Darin Dodson) on staff to take care of your trainee needs. Stop by the Plans Section ASAP to get your valuable training accomplishments properly documented.

Farmington Fire - Transportation Map - July 16, 2003



Farmington Fire - Fire Perimeter as of 21:00 7/15